

## REMARKS

In accordance with the preliminary amendment which was filed with this application on February 13, 2002, claims 12-29 are in the present application. Applicant thanks the Examiner for the telephone conference of March 3, 2005 in which the status of the claims and the previous entry of the preliminary amendment were discussed.

By the present amendment, claims 12, 14, 15, 21, 23, 25, 26, and 27 are amended, claims 16, 24, 28, and 29 are canceled without prejudice or disclaimer, and new claims 30-38 are hereby added. By the present amendment, the specification is amended to correct typographical errors. In addition, applicants are submitting herewith a paper copy and computer readable format (CRF) of a corrected sequence listing which corrects typographical errors in the original sequence listing that was filed with the present divisional application on February 13, 2002. The sequence listing on the paper copy and the CRF are the same.

As the amendments, the corrections to the sequence listing, and the new claims are fully supported by the original application, the amendments, corrected sequence listing, and the new claims add no new matter.

In view of the above-described amendments and following remarks, applicants respectfully request consideration of claims 12-15, 21-23, 25-27, and 30-38.

### Objections to the Disclosure

The Patent Office has objected to inconsistencies in the disclosure with respect to the Sequence Identifiers. Specifically the Patent Office stated:

Thus, it appears that the sequence identifiers for NO: 5 and NO: 7 do not correspond to the full-length sequence are set forth in the specification, and the text of the specification do not correspond to the sequence identifiers. (See page 2 of the Office Action.)

To correct these inconsistencies, applicants have amended page 3 of the specification to indicate that SEQ ID NO: 7 is the sequence of the K $\alpha$ /K $\beta$  binding domain of the rat KChAP protein shown in Figure 2 and set forth in SEQ ID NO:2, and that SEQ ID NO: 5 is the sequence of K $\alpha$ /K $\beta$  binding domain of the human KChAP protein shown in Figure 3 and set forth in SEQ ID NO:4. Applicants have also amended the sequence listing to correct the organism

names for SEQ ID NO:5 and SEQ ID NO:7. Applicants submit that the amendments to the specification and sequence listing overcome the objection.

Applicants have also corrected the sequence of SEQ ID NO: 6 in the sequence listing to be consistent with the sequence shown on page 8, line 5 through page 9, line 11 of the specification, as corrected by the preliminary amendment submitted with the original application on February 13, 2002. Applicants have also corrected the sequence of SEQ ID NO: 10 to be consistent with the sequence shown on page 4, lines 12-20 of the specification.

### 35 USC § 112

The Patent Office has rejected original claims 12-16 of the original application under 35 USC §112, second paragraph, “as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention”. (See page 2 of the Office Action.) Although claims 12 and 13, as amended by the preliminary amendment filed on February 13, 2003, were not considered by the Examiner, some of the comments of the Examiner are still relevant to the current claims. Accordingly, applicants have amended claims 12 and 15 to replace the term “KChAP” with the term “potassium channel associated protein”. Applicants have also removed the reference to the figures from the claims.

The Patent Office has also rejected original claims 12-16 of the original application under 35 USC §112, first paragraph, as containing subject matter which was not described in the specification as to reasonably convey one of ordinary skill in the art that the inventors, at the time the application was filed, had possession of the claimed invention.

Applicants submit that amended claim 12, which recites proteins comprising SEQ. ID NO: 2, 4, or 6, meets the requirements of §112. Applicants also submit that amended claim 14, which recites a protein that binds to Kv $\alpha$  subunits Kv2.1, Kv2.2, Kv1.3, and Kv4.3 and has a sequence which is 95% identical to SEQ ID NO: 2 or SEQ ID NO: 4, meets the requirements of §112. In addition, applicants submit that amended claim 15, which recites a peptide comprising SEQ ID NO:5, SEQ ID NO:7, or SEQ ID NO: 10, also meets all requirements of § 112. As the remaining claims all depend from claims 12, 14, or 15, applicants submit that claims 13, 21-23, 25-27, and 30-38 also meet the requirements of 35 USC § 112.

### § 102(a)

Appl. No. 10/075,075  
Amdt. dated: March 4, 2005  
Reply to Final Office Action of October 4, 2004

The Patent Office has rejected claims original claims 12, 13, 15, and 16 under 35 USC § 102(a) as being anticipated by Chung et al. (December 5, 1997; Science 278:1803-1805.

Chung et al. does not disclose a protein comprising SEQ ID NOs: 2, 4 , or 6 as recited in claim 12 as amended. In addition, Chung et al. does not disclose a peptide comprising SEQ ID NO. 5, 7 or 10, as recited in claim 15 as amended. Accordingly, applicants submit that Chung et al. does not anticipate any of the current claims.

Applicants submit that claims 12-15, 21-23, 25-27, and 30-38 are now in condition for allowance. Prompt notice of such allowance is respectfully requested. If the Examiner has any questions regarding the pending claims or the corrected sequence listing, she is encouraged to call the attorney of record, Ms. Pamela Docherty, at (216) 622-8416.

Respectfully submitted,

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By: Kristin J. Frost  
Kristin J. Frost, Reg. No. 50,627  
(216) 622-8895